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NIOSH Publication No. 2005-149:

NIOSH Pocket Guide to Chemical Hazards

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Mercury compounds [except (organo) alkyls] (as Hg)

CAS 7439-97-6

Hg (metal)

RTECS [OV455](#)

Synonyms & Trade Names

Mercury metal: Colloidal mercury, Metallic mercury, Quicksilver

Synonyms of "other" Hg compounds vary depending upon the specific compound.

DOT ID & Gu
2809 [172](#) (metal)

Exposure Limits

NIOSH REL: Hg Vapor: TWA 0.05 mg/m³ [skin]

 Other: C 0.1 mg/m³ [skin]

OSHA PEL†: C 0.1 mg/m³
IDLH 10 mg/m³ (as Hg) See: [7439976](#)

Conversion

Physical Description

Metal: Silver-white, heavy, odorless liquid. [Note: "Other" Hg compounds include all inorganic & aryl Hg compounds except alkyls.]

MW: 200.6	BP: 674°F	FRZ: -38°F	Sol: Insoluble
VP: 0.0012 mmHg	IP: ?		Sp.Gr: 13.6 (met
FLP: NA	UEL: NA	LEL: NA	

Metal: Noncombustible Liquid

Incompatibilities & Reactivities

Acetylene, ammonia, chlorine dioxide, azides, calcium (amalgam formation), sodium carbide, lithium, rubidium, copper

Measurement Methods

 NIOSH [6009](#); OSHA [ID140](#)

 See: [NMAM](#) or [OSHA Methods](#)

Personal Protection & Sanitation ([See protection](#))

Skin: Prevent skin contact

Eyes: No recommendation

Wash skin: When contaminated

Remove: When wet or contaminated

Change: Daily

First Aid ([See procedures](#))

Eye: Irrigate immediately

Skin: Soap wash promptly

Breathing: Respiratory support

Swallow: Medical attention immediately

Respirator Recommendations

Mercury vapor: NIOSH

Up to 0.5 mg/m³:

(APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern†

(APF = 10) Any supplied-air respirator

Up to 1.25 mg/m³:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode

(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern†

Up to 2.5 mg/m³:

(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern†

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern†
 (APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode/PAPR†
 (APF = 50) Any self-contained breathing apparatus with a full facepiece
 (APF = 50) Any supplied-air respirator with a full facepiece

Up to 10 mg/m³:

(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern/Any appropriate escape-type, self-contained breathing apparatus

Other mercury compounds: NIOSH/OSHA

Up to 1 mg/m³:

(APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern†

(APF = 10) Any supplied-air respirator

Up to 2.5 mg/m³:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode

(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern†

Up to 5 mg/m³:

(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern†

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern†

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode/PAPR†

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

Up to 10 mg/m³:

(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern/Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection](#)

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, incoordination, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss, proteinuria

Target Organs Eyes, skin, respiratory system, central nervous system, kidneys

See also: [INTRODUCTION](#) See ICSC CARD: [0056](#) See MEDICAL TESTS: [0136](#)

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